

## REMARKS

### A. Request for Reconsideration

Applicants have carefully considered the matters raised by the Examiner in the outstanding Office Action but remain of the position that patentable subject matter is present. Applicants respectfully request reconsideration of the Examiner's position based on the Declaration of Mr. Soc Man Ho Kimura, the amendments to the claims and the following remarks.

### B. The Invention

The present invention is directed to a photographic material having high sensitivity, excellent shelf life stability, low fogging and low deterioration. In one of the novel aspects of the invention, the photographic material is composed of a colorant of formula (1) and a reducing agent of formula (7).

### C. The Office Action

Claims 1-9 had been rejected as being anticipated by Kagawa (EP 1079269), Kagawa (EP 1035430), Kimura (US 6,413,711), Kagawa (US 6,492,102) or Kagawa (US 6,677,113). Kagawa '269 is the European equivalent of Kagawa '102, and Kagawa '430 is the European equivalent of Kagawa '113.

1. Rejection based on Kagawa '102 (equal to Kagawa '269)

Kagawa '102 teaches a photographic material having a sensitizing dye of formula (S-1) (col. 3, lines 29-62), and a reducing agent of formula (A) (col. 47, lines 28-46). The Examiner had taken the position that the sensitizing dye and the reducing agent of Kagawa '102 fall within the scope of formula (1) and formula (7) of the present invention.

The colorant of formula (1) of claim 1 is different than the sensitizing dye of formula (S-1) of Kagawa '102. However, there is a slight overlap between the definitions of these compounds. In col. 3, Kagawa '102 teaches that  $Z_1$  and  $Z_2$  each represent a nonmetallic element necessary to form a 5- or 6-membered ring. Broadly speaking, the description of  $Z_1$  and  $Z_2$  encompasses formula (1) of claim 1 having a 5-membered ring with nitrogen and sulfur, a 6-membered aromatic ring attached to the 5-membered ring, and aromatic groups  $A_{r1}$  and  $A_{r2}$  attached to the 6-membered ring.

However, of the 80 exemplary compounds disclosed by Kagawa '102, only compound no. 45 (cols. 31-32) falls within the scope of formula (1) of claim 1. Thus, even though the definition of  $Z_1$  and  $Z_2$  of formula (S-1) of Kagawa '102 broadly reads on formula (1) of the invention, 79 out of the 80 exemplary compounds of Kagawa '102 fall outside the scope of formula (1)

of claim 1. Kagawa '102 therefore teaches away from compounds falling within the scope of formula (1) of the invention.

Similar to formula (S-1) of Kagawa '102, formula (A) at col. 47 of Kagawa '102 broadly overlaps formula (7) of claim 1. Overlap exists because the linking groups of formula (A) of Kagawa '102 and formula (7) of the invention can be  $-\text{CH}_2-$ . However, the overlap ends there. Besides hydrogen, Kagawa '102 teaches that R is an alkyl group having 1-10 carbon atoms, while  $\text{R}_{11}$  and  $\text{R}_{12}$  of formula (7) of the invention are aromatic or nonaromatic cyclic groups. Thus, the overlap between formula (A) of Kagawa '102 and formula (7) of the invention exists only because the linking groups can be  $-\text{CH}_2-$ .

Although a slight overlap exists between formula (1) of claim 1 and formula (S-1) of Kagawa '102, Applicants respectfully submit that Kagawa '102 provides no motivation to select compound no. 45 out of the 80 exemplary compounds at cols. 19-40 of Kagawa '102. In addition, Applicants respectfully submit that Kagawa '102 provides no motivation to employ compound no. 45 with a reducing agent having a cyclic group attached to the linking group (formula (7) of claim 1). Applicants have enclosed a Declaration of Mr. Soc Man Ho Kimura to demonstrate the superiority of this combination, which is neither taught or suggested by Kagawa '102.

Mr. Kimura prepared and evaluated 3 photographic samples. Comparative sample A was prepared in accordance with Sample 2-1 in Table 2 at col. 67 of Kagawa '102, except that colorant No. 43 was replaced by colorant No. 45 in cols. 31-32 of Kagawa '102, and reducing agent A-3 at col. 65 of Kagawa '102 was replaced by reducing agent A-4 at col. 48 of Kagawa '102. As discussed above, Comparative sample A contained colorant no. 45, the only exemplary compound of Kagawa '102 that falls within the scope of formula (1) of claim 1. However, reducing agent A-4 of Comparative sample A is outside the scope of formula (7) of claim 1, since reducing agent A-4 has an alkyl group attached to the linking group.

Inventive samples B and C were similarly prepared, except that reducing agent A-4 was respectively replaced by reducing agent 3-1 at page 49 of the application and by reducing agent 3-72 at page 57 of the application. Reducing agents 3-1 and 3-72 are within formula (7) of claim 1, since reducing agent 3-1 has a cyclic group attached to the linking group and since reducing agent 3-72 has a  $\text{-CH}_2\text{-}$  linking group.

Mr. Kimura evaluated samples A-C for photographic performance. The evaluation results are illustrated in Table 2 of the Declaration.

As shown in Table 2, Inventive samples B and C satisfying the limitations of claim 1 is superior to Comparative sample A outside the scope of claim 1. Specifically, Table 2 shows that Inventive Samples B and C are superior to Comparative Sample A in terms of Dmin, sensitivity, Dmax, process environment  $\Delta$ sensitivity, light resistance and shelf life stability.

Applicants respectfully submit that Table 2 of the Declaration demonstrates the superiority of the combination of a colorant of formula (1) of the invention and a reducing agent of formula (7) of the invention. It is believed that Kagawa '102 does not teach or suggest this superiority, since Kagawa '102 provides no motivation to select compound no. 45 out of the 80 exemplary colorants. It is also believed that the present invention is superior to the teachings of Kagawa '102, since Kagawa '102 does not teach or suggest the superiority reducing agents represented by compounds 3-1 and 3-72 of the present invention.

It is therefore respectfully submitted that the present invention is patentable over Kagawa '102 and its European equivalent Kagawa '269.

2. Rejection based on Kagawa '113 (equal to Kagawa '430)

For the purposes of this rejection, the teachings of Kagawa '113 are similar to the teachings of Kagawa '102 discussed in section 1 above. Kagawa '113 teaches sensitizing dyes of formulas (1)-(6) at cols. 3-8. Reducing agents of formula (A) are taught at col. 55.

Similar to Kagawa '102, a broad reading of formulas (1), (3) and (5) of Kagawa '113 discloses formula (1) of claim 1. However, Kagawa '113 lists 80 exemplary sensitizing dyes at cols. 13-32, none of which fall within the scope of formula (1) of claim 1. Thus, even though a slight overlap exists between the broad formulas of Kagawa '113 and formula (1) of claim 1, Applicants respectfully submit that Kagawa '113 provides no motivation to select a compound that falls within the scope of formula (1) of claim 1, since none of the 80 exemplary compounds of Kagawa '102 fall within the scope of formula (1).

Also similar to Kagawa '102 discussed above, Kagawa '113 discloses formula (A) at col. 55. Formula (A) broadly overlaps formula (7) of claim 1, because the linking groups of formula (A) of Kagawa '113 and formula (7) of the invention can be  $\text{-CH}_2\text{-}$ . However, the overlap ends there, since Kagawa '113 teaches that R is an alkyl group having 1-10 carbon atoms, while  $R_{11}$  and  $R_{12}$  of formula (7) of the invention are aromatic or nonaromatic cyclic

groups. Thus, the overlap between formula (A) of Kagawa '113 and formula (7) of the invention exists only because the linking groups can be  $\text{-CH}_2\text{-}$ .

Similar to Kagawa '102, although a slight overlap exists between formula (1) of claim 1 and the formulas of Kagawa '113, Applicants respectfully submit that Kagawa '113 provides no motivation to select a compound representative of formula (1) of claim 1, since none of the 80 exemplary compounds of Kagawa '113 fall within the scope of formula (1). In addition, Applicants respectfully submit that Kagawa '113 provides no motivation to employ a compound of formula (1) of claim 1 with a reducing agent having a cyclic group attached to the linking group (formula (7) of claim 1). Again, the enclosed Declaration of Mr. Soc Man Ho Kimura demonstrates the superiority of this combination as explained above.

Applicants therefore believe that Kagawa '102 does not teach or suggest the superiority of the present invention demonstrated by Mr. Kimura, since Kagawa '113 provides no motivation to select a compound of formula (1) of claim 1, and since none of the 80 exemplary compounds of Kagawa '113 fall within the scope of formula (1). It is also believed that the present invention is superior to the teachings of Kagawa '113, since Kagawa '113 does not teach or suggest the superiority

reducing agents represented by compounds 3-1 and 3-72 of the present invention.

It is therefore respectfully submitted that the present invention is patentable over Kagawa '113 and its European equivalent Kagawa '430.

### 3. Rejection based on Kimura '711

Similar to Kagawa '102 and Kagawa '113, Kimura '711 teaches sensitizing dyes (formulas (2a) and (2c)) that slightly overlap formula (1) of claim 1 and reducing agents (bisphenol compounds, col. 28, line 56) that describe the type of reducing agent of formula (7) of the present invention.

With regard to the sensitizing dyes of Kimura '711, none of the 53 compounds disclosed at cols. 11-24 fall within the scope of formula (1) of claim 1. Thus, similar to Kagawa '102 and Kagawa '113, a broad reading of the disclosed formulas overlaps formula (1) of claim 1, but none or almost none of the exemplary compounds fall within the scope of formula (1).

Turning to the reducing agents, Kimura '711 differs from Kagawa '102 and Kagawa '113 with regard to the disclosure at col. 28, line 24 to col. 29, line 2. Kimura '711 discloses many different types of reducing agents, of which only the bisphenol reducing agents describe formula (7). However, Kimura '711 does not give the chemical structure of the bisphenol reducing



agents. Thus, although Kimura '711 discloses bisphenol reducing agents, it cannot be said that Kimura '711 provides motivation to select bisphenol reducing agents from the large list of disclosed reducing agents, and it cannot be further said that Kimura '711 provides motivation to select bisphenol reducing agents of formula (7) of claim 1 out of all possible bisphenol reducing agents. It is therefore believed that Kimura '711 does not disclose claim (7) of the invention.

Similar to Kagawa '102 and Kagawa '113, although a slight overlap exists between formula (1) of claim 1 and the broad formulas of Kimura '711, Applicants respectfully submit that Kimura '711 provides no motivation to select a compound representative of formula (1) of claim 1, since none of the 53 exemplary compounds of Kimura '711 fall within the scope of formula (1). In addition, Applicants respectfully submit that Kimura '711 provides no motivation to employ a compound of formula (1) of claim 1 with a reducing agent of formula (7), since Kimura '711 does provides no motivation to select bisphenol reducing agents, and since Kimura '711 does not specifically disclose bisphenol reducing agents of formula (7) of claim 1. Again, the enclosed Declaration of Mr. Soc Man Ho Kimura demonstrates the superiority of the present invention for the reasons explained above.

Applicants therefore believe that Kimura '711 does not teach or suggest the superiority of the present invention demonstrated by Mr. Kimura, since Kimura '711 provides no motivation to select a compound of formula (1) of claim 1, and since none of the 53 exemplary compounds of Kimura '711 fall within the scope of formula (1). It is also believed that the present invention is superior to the teachings of Kimura '711, since Kimura '711 does not teach or suggest the superiority reducing agents represented by compounds 3-1 and 3-72 of the present invention.

It is therefore respectfully submitted that the present invention is patentable over Kimura '711.

F. Conclusion

In view of the foregoing and the enclosed, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any extensions of time or fees be necessary in order to maintain this Application in pending condition, appropriate requests are

. hereby made and authorization is given to debit Account # 02-  
2275.

Respectfully submitted,

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Encl: Executed Declaration of Mr. Soc Man Ho Kimura  
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